Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A substantially purified peptide which comprises a sequence selected from the group consisting of:
   - i) an amino acid sequence as provided in SEQ ID NO:4,
   - ii) an amino acid sequence which is at least 80%~~60%~~ identical to SEQ ID NO:4,
   - iii) an amino acid sequence as provided in SEQ ID NO:5,
   - iv) an amino acid sequence which is at least 80% identical to SEQ ID NO:5,
   - v) an amino acid sequence as provided in SEQ ID NO:48,
   - vi) an amino acid sequence which is at least 80%~~70%~~ identical to SEQ ID NO:48,
   - vii) an amino acid sequence as provided in SEQ ID NO:53,
   - viii) an amino acid sequence which is at least 80%~~70%~~ identical to SEQ ID NO:53,
   - ix) a biologically active fragment of any one of i) to viii), and
   - x) a precursor comprising the amino acid sequence according to any one of i) to ix),

   wherein the peptide~~, or fragment thereof,~~ exhibits antifungal and/or antibacterial activity.

2-4. (Deleted)

5. (Previously Presented) The peptide of claim 1 which is fused to at least one other polypeptide/peptide sequence.

6. (Currently Amended) An isolated polynucleotide, the polynucleotide comprising a sequence selected from the group consisting of:

i) a sequence of nucleotides provided in SEQ ID NO:9 or SEQ ID NO:10;

ii) a sequence of nucleotides provided in SEQ ID NO:11;

iii) a sequence of nucleotides provided in SEQ ID NO:12;

iv) a sequence of nucleotides provided in SEQ ID NO:13;

v) a sequence of nucleotides provided in SEQ ID NO:50;

vi) a sequence of nucleotides provided in SEQ ID NO:51;

vii) a sequence of nucleotides provided in SEQ ID NO:55;

viii) a sequence of nucleotides provided in SEQ ID NO:56;

ix) a sequence encoding a peptide comprising a sequence selected from the group consisting of:~~according to claim 1~~;

a) an amino acid sequence as provided in SEQ ID NO:4,

b) an amino acid sequence which is at least 80% identical to SEQ ID NO:4,

c) an amino acid sequence as provided in SEQ ID NO:5,

d) an amino acid sequence which is at least 80% identical to SEQ ID NO:5,

e) an amino acid sequence as provided in SEQ ID NO:48,

f) an amino acid sequence which is at least 80% identical to SEQ ID NO:48,

g) an amino acid sequence as provided in SEQ ID NO:53,

h) an amino acid sequence which is at least 80% identical to SEQ ID NO:53,

i) a biologically active fragment of any one of i) to viii), and

j) a precursor comprising the amino acid sequence according to any one of i) to ix);

x) a sequence of nucleotides which is at least 80%~~66%~~

identical to SEQ ID NO:9, SEQ ID NO:10, or SEQ ID NO:12;

xi) a sequence of nucleotides which is at least 80%~~71%~~ identical to SEQ ID NO:11 or SEQ ID NO:13;

xii) a sequence of nucleotides which is at least 80%~~62%~~ identical to SEQ ID NO:50, or SEQ ID NO:51; and

xiii) a sequence of nucleotides which is at least 80%~~62%~~ identical to SEQ ID NO:55, or SEQ ID NO:56,~~; and~~

~~xiv) a sequence which hybridizes to any one of (i) to (viii) under high stringency conditions.~~

wherein the polynucleotide encodes a peptide exhibiting antifungal and/or antibacterial activity.

7. (Deleted)

8. (Previously Presented) A vector comprising the polynucleotide of claim 6.

9. (Previously Presented) A host cell comprising the polynucleotide of claim 6.

10. (Previously Presented) The host cell of claim 9 which is a plant cell.

11. (Currently Amended) A process for preparing a substantially purified peptide which comprises a sequence selected from the group consisting of:

i) an amino acid sequence as provided in SEQ ID NO:4,

ii) an amino acid sequence which is at least 80%~~60%~~ identical to SEQ ID NO:4,

iii) an amino acid sequence as provided in SEQ ID NO:5,

iv) an amino acid sequence which is at least 80% identical to SEQ ID NO:5,

v) an amino acid sequence as provided in SEQ ID NO:48,

vi) an amino acid sequence which is at least 80%~~70%~~ identical to SEQ ID NO:48,

vii) an amino acid sequence as provided in SEQ ID NO:53,

viii) an amino acid sequence which is at least 80%~~70%~~ identical to SEQ ID NO:53,

ix) a biologically active fragment of any one of i) to viii), and

x) a precursor comprising the amino acid sequence according to any one of i) to ix),

wherein the peptide~~, or fragment thereof,~~ exhibits antifungal and/or antibacterial activity, the process comprising cultivating a host cell according to claim 9 under conditions which allow expression of the polynucleotide encoding the peptide, and recovering the expressed peptide as a substantially purified peptide.

12. (Previously Presented) A composition comprising a peptide of claim 1, and one or more acceptable carriers.

13. (Previously Presented) A composition comprising a polynucleotide according to claim 6, and one or more acceptable carriers.

14. (Previously Presented) A method for killing, or inhibiting the growth and/or reproduction of a fungus and/or a bacteria, the method comprising exposing the fungus and/or bacteria to a peptide of claim 1.

15. (Currently Amended) A transgenic plant, the plant having been transformed with a polynucleotide according to claim 6, wherein the plant produces a peptide which comprises a sequence selected from the group consisting of:

i) an amino acid sequence as provided in SEQ ID NO:4,

ii) an amino acid sequence which is at least 80%~~60%~~

identical to SEQ ID NO:4,

iii) an amino acid sequence as provided in SEQ ID NO:5,

iv) an amino acid sequence which is at least 80% identical to SEQ ID NO:5,

v) an amino acid sequence as provided in SEQ ID NO:48,

vi) an amino acid sequence which is at least 80%~~70%~~ identical to SEQ ID NO:48,

vii) an amino acid sequence as provided in SEQ ID NO:53,

viii) an amino acid sequence which is at least 80%~~70%~~ identical to SEQ ID NO:53,

ix) a biologically active fragment of any one of i) to viii), and

x) a precursor comprising the amino acid sequence according to any one of i) to ix),

wherein the peptide~~, or fragment thereof,~~ exhibits antifungal and/or antibacterial activity.

16. (Previously Presented)A method of controlling fungal and/or bacterial infections of a crop, the method comprising cultivating a crop of transgenic plants of claim 15.

17. (Currently Amended) A transgenic non-human animal, the animal having been transformed with a polynucleotide according to claim 6, wherein the animal produces a peptide which comprises a sequence selected from the group consisting of:

i) an amino acid sequence as provided in SEQ ID NO:4,

ii) an amino acid sequence which is at least 80%~~60%~~ identical to SEQ ID NO:4,

iii) an amino acid sequence as provided in SEQ ID NO:5,

iv) an amino acid sequence which is at least 80% identical to SEQ ID NO:5,

v) an amino acid sequence as provided in SEQ ID NO:48,

vi) an amino acid sequence which is at least 80%~~70%~~ identical to SEQ ID NO:48,

vii) an amino acid sequence as provided in SEQ ID NO:53,

viii) an amino acid sequence which is at least 80%~~70%~~ identical to SEQ ID NO:53,

ix) a biologically active fragment of any one of i) to viii), and

x) a precursor comprising the amino acid sequence according to any one of i) to ix),

wherein the peptide~~, or fragment thereof,~~ exhibits antifungal and/or antibacterial activity.

18. (Previously Presented) A method of treating or preventing a fungal and/or bacterial infection in a patient, the method comprising administering to the patient a peptide of claim 1.

19. (Deleted)

20. (Previously Presented) An antibody which specifically binds a peptide of claim 1.

21. (Previously Presented) A method for killing, or inhibiting the growth and/or reproduction of a fungus, the method comprising exposing the fungus to a peptide which comprises a sequence selected from the group consisting of:

i) an amino acid sequence comprising residues 25 to 67 of SEQ ID NO:14,

ii) an amino acid sequence as provided in SEQ ID NO:17,

iii) an amino acid sequence comprising residues 26 to 67 of SEQ ID NO:15,

iv) an amino acid sequence which is at least 75% identical to any one of i) to iii),

v) an amino acid sequence comprising residues 26 to 66 of SEQ ID NO:18,

vi) an amino acid sequence which is at least 50% identical to v), and

vii) a biologically active fragment of any one of i) to vi).

22. (Deleted)

23. (Previously Presented) A method of controlling fungal infections of a crop, the method comprising cultivating a crop of transgenic plants which produce a peptide which comprises a sequence selected from the group consisting of:

i) an amino acid sequence comprising residues 25 to 67 of SEQ ID NO:14,

ii) an amino acid sequence comprising residues 25 to 66 of SEQ ID NO:16,

iii) an amino acid sequence as provided in SEQ ID NO:17,

iv) an amino acid sequence comprising residues 26 to 67 of SEQ ID NO:15,

v) an amino acid sequence which is at least 75% identical to any one of i) to iv),

vi) an amino acid sequence comprising residues 26 to 66 of SEQ ID NO:18,

vii) an amino acid sequence which is at least 50% identical to vi), and

viii) a biologically active fragment of any one of i) to vii).

24. (Deleted)

25. (Previously Presented) A method of treating or preventing a fungal infection in a patient, the method comprising administering to the patient a peptide which comprises a sequence selected from the group consisting of:

i) an amino acid sequence comprising residues 25 to 67 of SEQ ID NO:14,

ii) an amino acid sequence as provided in SEQ ID NO:17,

iii) an amino acid sequence comprising residues 26 to 67 of SEQ ID NO:15,

iv) an amino acid sequence which is at least 75% identical to any one of i) to iii),

v) an amino acid sequence comprising residues 26 to 66 of SEQ ID NO:18,

vi) an amino acid sequence which is at least 50% identical to v), and

vii) a biologically active fragment of any one of i) to vi).

26. (Deleted)

27. (Previously Presented) A kit comprising a peptide of claim 1.

28. (New) The substantially purified peptide of claim 1 which comprises a sequence selected from the group consisting of:

i) an amino acid sequence which is at least 85% identical to SEQ ID NO:4,

ii) an amino acid sequence which is at least 85% identical to SEQ ID NO:5,

iii) an amino acid sequence which is at least 85% identical to SEQ ID NO:48,

iv) an amino acid sequence which is at least 85% identical to SEQ ID NO:53,

wherein the peptide exhibits antifungal and/or antibacterial activity.

29. (New) The isolated polynucleotide according to claim 6, the polynucleotide comprising a sequence selected from the group consisting of:

i) a sequence encoding a peptide comprising a sequence selected from the group consisting of:

a) an amino acid sequence which is at least

85% identical to SEQ ID NO:4,

b) an amino acid sequence which is at least 85% identical to SEQ ID NO:5,

c) an amino acid sequence which is at least 85% identical to SEQ ID NO:48,

d) an amino acid sequence which is at least 85% identical to SEQ ID NO:53,

ii) a sequence of nucleotides which is at least 85% identical to SEQ ID NO:9, SEQ ID NO:10, or SEQ ID NO:12;

iii) a sequence of nucleotides which is at least 85% identical to SEQ ID NO:11 or SEQ ID NO:13;

iv) a sequence of nucleotides which is at least 85% identical to SEQ ID NO:50, or SEQ ID NO:51; and

v) a sequence of nucleotides which is at least 85% identical to SEQ ID NO:55, or SEQ ID NO:56,

wherein the polynucleotide encodes a peptide exhibiting antifungal and/or antibacterial activity.